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NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES: RSPEC 8 3 15 NUMBER OF NODES IS

STEREO ATTRIBUTES: NONE

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100.0% PROCESSED 1627 ITERATIONS

SEARCH TIME: 00.00.01

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SINCE FILE TOTAL **ENTRY** SESSION FULL ESTIMATED COST 162.62 162.83

49 ANSWERS

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L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
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AN 2004:252477 CAPLUS

DN 140:287391

TI Preparation of piperidinylpropylureidophenyltetrazoles as modulators of chemokine receptor activity.

IN Duncia, John V.; Gardner, Daniel S.; Santella, Joseph B.

PA Bristol-Myers Squibb Company, USA

SO PCT Int. Appl., 49 pp. CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

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ΡI	-	WO 2004024682					WO .2003-US28468						20030911					
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			GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	LC,	LK,	LR,
			LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	MZ,	NI,	NO,	NZ,	OM,
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			KG,	KZ,	MD,	RU,	TJ,	TM,	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,
			FI,	FR,	GB,	GR,	HU,	ΙE,	ΙT,	LU,	MC,	NL,	PT,	RO,	SE,	SI,	SK,	TR,
			BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,	TG
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			IE,	SI,	LT,	LV,	FI,	RO,	MK,	CY,	AL,	TR,	BG,	CZ,	EE,	HU,	SK	
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	WO	2003	-US2	8468		W		2003	0911									
os	MAI	RPAT	140:	2873	91													

AB Title compds. (I; R2 = H, Me, Et), were prepared as CCR3 chemokine receptor modulators (no data). Thus, (2S,3R)-3-amino-1-[(3S)-3-(4-fluorobenzyl)-1-piperidinyl]-2-butanol (preparation given), and Ph 3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)phenylcarbamate (preparation given) were stirred 6 h in MeCN to give I (R2 = Et).

Ι

IT 675122-43-7P 675122-44-8P 675122-45-9P
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES

(Uses)

(claimed compound; preparation of piperidinylpropylureidophenyltetrazoles as modulators of chemokine receptor activity)

RN 675122-43-7 CAPLUS

CN Urea, N-[3-ethyl-5-(1-methyl-1H-tetrazol-5-yl)phenyl]-N'-[(1R,2S)-3-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-2-hydroxy-1-methylpropyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 675122-44-8 CAPLUS

CN Urea, N-[(1R,2S)-3-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-2-hydroxy-1-methylpropyl]-N'-[3-(1-methyl-1H-tetrazol-5-yl)phenyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 675122-45-9 CAPLUS

CN Urea, N-[(1R,2S)-3-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-2hydroxy-1-methylpropyl]-N'-[3-methyl-5-(1-methyl-1H-tetrazol-5-yl)phenyl]-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

L4 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2001:935573 CAPLUS

DN 136:53686

TI Synthesis of piperidine-amido-ureas as modulators of chemokine receptor

activity Duncia, John V.; Santella, Joseph B.; Wacker, Dean A.; Yao, Wenqing; IN Zheng, Changsheng Dupont Pharmaceuticals Company, USA PA PCT Int. Appl., 326 pp. SO CODEN: PIXXD2 DT Patent English LΑ FAN.CNT 1 KIND APPLICATION NO. DATE PATENT NO. DATE \_\_\_\_ -----WO 2001-US19705 20010620 A2 20011227 WO 2001098268 PΙ 20020808 WO 2001098268 **A3** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG CA 2001-2413418 CA 2413418 AA 20011227 20010620 US 2001-885550 US 2002156102 A1 20021024 20010620 US 6638950 B2 20031028 EP 1296949 A2 20030402 EP 2001-946580 20010620 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR JP 2004516237 20040603 JP 2002-504224 T2 20010620 US 2003-635946 Α1 20040429 20030807 US 2004082790 PRAI US 2000-213066P Ρ 20000621 **A3** 20010620 US 2001-885550

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WO 2001-US19705

MARPAT 136:53686

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AB Title compds. I [M = absent CH2, CHR5, CHR13, CR13R13, and CR5R13; Q = CH2, CHR5, CHR13, CR13R13, and CR5R13; K = CH2, CHR5 and CHR6; J, L = CH2, CHR5, CHR6, CR6R6 and CR5R6; with the provisons that at least one of M, J,

ΙI

K, L, or Q contains an R5; and when M absent, J = CH2, CHR5, CHR13 and CR5R13; Z = 0, S, NR1a, C(CN)2, CH(NO)2, CHCN; R1a = H, (cyclo)alky1, amido, alkoxy, CN, NO2, etc.; E = C:O-alkyl, sulfonyl-alkyl, C:O-cycloalkyl; etc.; R3 = alkylamino, alkyl-carbocyclic, etc.; R5 = alkyl-carbocyclic; R6 = alk(en/yn)yl, alkyl-cycloalkyl, CN, alkylamino, alkyl-hydroxy, etc.; R13 = alk(en/yn)yl, cycloalkyl, alkyl-CF3, akylamino, alkyl-alkoxy; etc.] were prepared Over 80 synthetic examples were disclosed. For instance, (1R,2R)-2-(benzyloxycarbonylamino)cyclohexanecar boxaldehyde (preparation given) was oxidized to the corresponding carboxylic acid (NaOAc/HOAc, pH 3.5, CH3CN, resorcinol, NaClO2, 0°C, 16 h) and condensed with (S)-3-(4-fluorobenzyl)piperidine (preparation given; CH2Cl2, BOP, Et3N, 0°C, 16 h) to give the amide. The intermediate Cbz group was removed (MeOH, 10% Pd/C, 50 psi H2, overnight) and the amine acylated with 3-acetylphenylisocyanate (THF, 25°C) to give example compound II. I are modulators of chemokine receptor activity and are useful in the prevention of asthma and other allergic diseases.

382636-52-4P 382636-73-9P 382636-76-2P 382636-77-3P 382636-78-4P 382636-87-5P 382636-89-7P 382636-90-0P 382636-91-1P 382636-93-3P 382636-94-4P 382636-96-6P 382636-97-7P 382636-98-8P 382637-02-7P 382637-00-5P 382637-01-6P 382637-02-7P 382637-09-4P 382637-10-7P 382637-11-8P 382637-13-0P 382637-15-2P 382637-14-4P 382637-33-4P 382637-27-6P 382637-39-0P 382637-77-6P 382638-12-2P 382638-14-4P 382638-15-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

RN 382636-52-4 CAPLUS

CN

Piperidine, 1-[3-[[[(3,5-diacetylphenyl)amino]carbonyl]amino]-1-oxopropyl]-3-[(4-fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382636-73-9 CAPLUS

CN Piperidine, 1-[[[[(3-acetylphenyl)amino]carbonyl]amino]acetyl]-3-[(4fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

RN 382636-76-2 CAPLUS

CN 1-Piperidinebutanoic acid, 3-[(4-fluorophenyl)methyl]- $\alpha$ -[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]- $\gamma$ -oxo-, phenylmethyl ester, ( $\alpha$ S,3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382636-77-3 CAPLUS

CN 1-Piperidinebutanamide, 3-[(4-fluorophenyl)methyl]- $\alpha$ -[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]- $\gamma$ -oxo-, ( $\alpha$ S, 3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382636-78-4 CAPLUS

CN Morpholine, 4-[(2S)-4-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-2-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1,4dioxobutyl]- (9CI) (CA INDEX NAME)

RN 382636-87-5 CAPLUS

CN Piperidine, 3-[(4-fluorophenyl)methyl]-1-[(3S)-3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1,4-dioxo-4-(1-pyrrolidinyl)butyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382636-88-6 CAPLUS

CN 1-Piperidinebutanamide, N-(1,1-dimethylethyl)-3-[(4-fluorophenyl)methyl]-  $\alpha$ -[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-  $\gamma$ -oxo-, ( $\alpha$ S,3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382636-89-7 CAPLUS

CN Piperidine, 3-[(4-fluorophenyl)methyl]-1-[(3S)-3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1,4-dioxo-4-(1-piperidinyl)butyl]-, (3S)- (9CI) (CA INDEX NAME)

RN 382636-90-0 CAPLUS

CN Piperidine, 1-[(2S)-3-[[[(3-acetylphenyl)amino]carbonyl]amino]-2-amino-1-oxopropyl]-3-[(4-fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382636-91-1 CAPLUS

CN Piperidine, 1-[(2R)-3-[[[(3-acetylphenyl)amino]carbonyl]amino]-2-amino-1-oxopropyl]-3-[(4-fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382636-93-3 CAPLUS

CN Piperazine, 1-[(2S)-4-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-2-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1,4dioxobutyl]-4-methyl- (9CI) (CA INDEX NAME)

RN 382636-94-4 CAPLUS

CN Piperidine, 3-[(4-fluorophenyl)methyl]-1-[(3S)-3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-4-(4-morpholinyl)-1-oxobutyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382636-96-6 CAPLUS

CN 1-Piperidinebutanamide, 3-[(4-fluorophenyl)methyl]-N,N-dimethyl- $\alpha$ -[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]- $\gamma$ -oxo-, ( $\alpha$ S,3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382636-97-7 CAPLUS

CN Acetamide, N-[(1S)-1-[[[[(3-acetylphenyl)amino]carbonyl]amino]methyl]-2-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-2-oxoethyl]- (9CI) (CA INDEX NAME)

RN 382636-98-8 CAPLUS

CN Acetamide, N-[(1R)-1-[[[[(3-acetylphenyl)amino]carbonyl]amino]methyl]-2-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-2-oxoethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382636-99-9 CAPLUS

CN Benzamide, 3-[[[(1S)-3-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-1-(4-morpholinylmethyl)-3-oxopropyl]amino]carbonyl]amino]-N-methyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-00-5 CAPLUS

CN Piperidine, 1-[(3S)-3-[[[(3-chlorophenyl)amino]carbonyl]amino]-4-(4-morpholinyl)-1-oxobutyl]-3-[(4-fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

RN 382637-01-6 CAPLUS

CN Piperidine, 1-[(3S)-3-[[[(3-cyanophenyl)amino]carbonyl]amino]-4-(4-morpholinyl)-1-oxobutyl]-3-[(4-fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-02-7 CAPLUS

CN Piperidine, 3-[(4-fluorophenyl)methyl]-1-[(3S)-3-[[[(3-methoxyphenyl)amino]carbonyl]amino]-4-(4-morpholinyl)-1-oxobutyl]-, (3S)-(9CI) (CA INDEX NAME)

CN Benzoic acid, 3-[[[(1S)-3-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-1-(4-morpholinylmethyl)-3-oxopropyl]amino]carbonyl]amino]-4-methoxy-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-07-2 CAPLUS

CN Morpholine, 4-[(2S,3R)-4-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-3-methyl-2-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1,4-dioxobutyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-08-3 CAPLUS

CN Benzamide, 3-[[[(1S,2R)-3-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-2-methyl-1-(4-morpholinylcarbonyl)-3-oxopropyl]amino]carbonyl]amino]-N-methyl- (9CI) (CA INDEX NAME)

RN 382637-09-4 CAPLUS

CN Piperidine, 1-[(3R)-3-[[[(3,5-diacetylphenyl)amino]carbonyl]amino]-1-oxobutyl]-3-[(4-fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-10-7 CAPLUS

CN Piperidine, 3-[(4-fluorophenyl)methyl]-1-[(3R)-3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1-oxobutyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-11-8 CAPLUS

CN Piperidine, 3-[(4-fluorophenyl)methyl]-1-[(2S)-2-methyl-3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1-oxopropyl]-, (3S)- (9CI) (CA INDEX NAME)

RN 382637-13-0 CAPLUS

CN Piperidine, 1-[(3S)-3-[[[(3-acetylphenyl)amino]carbonyl]amino]-4-[(1,1-dimethylethyl)methylamino]-1-oxobutyl]-3-[(4-fluorophenyl)methyl]-, (3S)-(9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-15-2 CAPLUS

CN Piperidine, 3-[(4-fluorophenyl)methyl]-1-[(2R)-2-methyl-3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1-oxopropyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-17-4 CAPLUS

CN 1-Piperidinebutanamide, N-cyclopropyl-3-[(4-fluorophenyl)methyl]- $\alpha$ -[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]- $\gamma$ -oxo-, ( $\alpha$ S,3S)- (9CI) (CA INDEX NAME)

RN 382637-19-6 CAPLUS

CN Acetamide, N-[(1R)-2-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-1[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]methyl]-2oxoethyl]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-21-0 CAPLUS

CN 1H-Azepine, 1-[(2S)-4-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-2-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1,4dioxobutyl]hexahydro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-24-3 CAPLUS

CN Propanamide, N-[(1R)-2-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-1-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]methyl]-2-oxoethyl]-2,2-dimethyl- (9CI) (CA INDEX NAME)

RN 382637-27-6 CAPLUS

CN Piperidine, 1-[(3S)-4-[(1,1-dimethylethyl)methylamino]-3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1-oxobutyl]-3-[(4-fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-29-8 CAPLUS

CN Piperidine, 1-[(2R)-2-[bis(2-methylpropyl)amino]-3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1-oxopropyl]-3-[(4-fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-33-4 CAPLUS

CN Piperidine, 1-[(2R,3R)-3-[[[(3,5-diacetylphenyl)amino]carbonyl]amino]-2-hydroxy-1-oxobutyl]-3-[(4-fluorophenyl)methyl]-, (3S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 382637-38-9 CAPLUS

CN Piperidine, 3-[(4-fluorophenyl)methyl]-1-[(2R)-2-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1-oxopropyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-39-0 CAPLUS

CN Piperidine, 1-[(2S)-2-[[[(3,5-diacetylphenyl)amino]carbonyl]amino]-1-oxopropyl]-3-[(4-fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-77-6 CAPLUS

CN Piperidine, 3-[(4-fluorophenyl)methyl]-1-[(2R,3R)-2-hydroxy-3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1-oxobutyl]-, (3S)-(9CI) (CA INDEX NAME)

RN 382638-03-1 CAPLUS

CN 1-Piperidinebutanamide, 3-[(4-fluorophenyl)methyl]-N-methyl- $\alpha$ -[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]- $\gamma$ -oxo-, ( $\alpha$ S,3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382638-06-4 CAPLUS

CN Piperidine, 1-[2-[[[(3-acetylphenyl)amino]carbonyl]amino]-2-methyl-1-oxopropyl]-3-[(4-fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382638-11-1 CAPLUS

CN Piperidine, 3-[(4-fluorophenyl)methyl]-1-[(3S)-3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1-oxo-4-(1-piperidinyl)butyl]-, (3S)- (9CI) (CA INDEX NAME)

RN 382638-12-2 CAPLUS

CN Piperidine, 1-[3-[[[(3,5-diacetylphenyl)amino]carbonyl]amino]-1-oxobutyl]-3-[(4-fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382638-14-4 CAPLUS

CN Piperidine, 3-[(4-fluorophenyl)methyl]-1-[3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1-oxobutyl]-, (3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

$$\bigvee_{N-N}^{N}\bigvee_{Me}^{N}\bigvee_{H}^{$$

RN 382638-15-5 CAPLUS

CN Piperidine, 3-[(4-fluorophenyl)methyl]-1-[2-methyl-3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1-oxopropyl]-, (3S)- (9CI) (CA INDEX NAME)

IT 382637-82-3P 382637-95-8P 382637-96-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(intermediate; synthesis of piperidine amides as modulators of chemokine receptor activity)

RN ' 382637-82-3 CAPLUS

CN 1-Piperidinebutanoic acid, 3-[(4-fluorophenyl)methyl]- $\alpha$ -[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]- $\gamma$ -oxo-, ( $\alpha$ S,3S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-95-8 CAPLUS

CN Carbamic acid, [(1R)-2-[(3S)-3-[(4-fluorophenyl)methyl]-1-piperidinyl]-1-[[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]methyl]-2-oxoethyl]-, phenylmethyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 382637-96-9 CAPLUS

CN. Piperidine, 1-[(2R)-2-amino-3-[[[[3-(1-methyl-1H-tetrazol-5-yl)phenyl]amino]carbonyl]amino]-1-oxopropyl]-3-[(4-fluorophenyl)methyl]-, (3S)- (9CI) (CA INDEX NAME)

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        200803 UREA
         27610 ASTHMA
             8 (PIPERIDIN? (L) UREA) (L) ASTHMA
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     Preparation of biphenyl derivatives as \beta2-adrenergic agonists and
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     muscarinic antagonists for pulmonary disorders.
     Mammen, Mathai; Dunham, Sarah; Hughes, Adam; Lee, Tae Weon; Husfeld,
IN
     Cralg; Stangeland, Eric
PA
     USA
     U.S. Pat. Appl. Publ., 85 pp.
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                                             US 2004-779157
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RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE,

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             GQ, GW, ML, MR, NE, SN, TD, TG
                                             US 2004-778290
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     US 2004209860
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     US 2003-467035P
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     MARPAT 141:225161
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$$R^{1}$$
 $R^{2}$ 
 $R^{2}$ 
 $R^{3}$ 
 $R^{4}$ 
 $R^{5}$ 
 $R^{7}$ 
 $R^{6}$ 
 $R^{6}$ 

$$\begin{array}{c|c} & & & & \\ & & \\ & & & \\ & & & \\ & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\$$

AB Title compds. I [R1 (taken 0-3 times) = alk(en/yn)yl, cycloalkyl, etc.; R2 (taken 0-3 times) = alk(en/yn)yl, cycloalkyl, CN, etc.; W = O, substituted N; R3 (taken 0-4 times) = alk(en/yn)yl, cycloalkyl, etc.; R4 = divalent group; R5 = H, alkyl; R6 = amino, alkoxy, etc.; R7 = H, etc.] are prepared For instance, N-[1,1'-Biphenyl-2-yl]-N'-[1-(9-aminononyl)piperidin -4-yl]urea (preparation given) is combined with 8-Benzyloxy-5-(2,2-dihydroxyacetyl)-1H-quinolin-2-one (CH2Cl2, NaHB(OAc)3) and the product reduced (MeOH, H2-Pd/C) to give II. Selected example compds. have Ki < 10 nM for the β2 and muscarinic receptor. I are useful in the treatment of pulmonary disorders, such as chronic obstructive pulmonary disease and asthma.

- L1 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 2003:622568 CAPLUS
- DN 139:164710
- TI Preparation of ureidoalkylpiperidines as modulators of chemokine CCR3 receptor activity.
- IN Ko, Soo S.; Delucca, George V.; Duncia, John V.; Santella, Joseph B., III; Wacker, Dean A.
- PA Bristol-Myers Squibb Pharma Company, USA
- SO U.S., 145 pp., Cont.-in-part of U.S. Ser. No. 465,286, abandoned. CODEN: USXXAM
- DT Patent
- LA English

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	PATENT NO.			VIND				APPLICATION NO.					DATE					
PI	US 6605623 US 6331541			B1	-	20030812 20011218		US 2000-598821 US 1999-465288					20000621					
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	US	1999	-465	948		<b>A</b> 3		1999	1217									
	US	2000	-213	051P		P		2000	0621									
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AB [Title compds. I; M = CH2, CHR5, CHR13, CR13R13, CR5R13; Q = CH2, CHR5, CHR13, CR13R13, CR5R13; J, L = CH2, CHR5, CHR6, CR6R6, CR5R6; Z = O, S; M = CH2, CHR5, CHR13, CR13R13, CR5R13; K = CHR5, CR5R6; Z = O, S; E = (CHR7)(CHR9)v(CR11R12); R1, R2 = H, alkyl, alkenyl, alkynyl, (substituted) alkylcycloalkyl; R2R3 = atoms to form a (substituted) 5-7 membered ring; R3, R5 = (substituted) (alkyl)cycloalkyl, (alkyl)heterocyclyl; R4 = null, O, alkyl, alkenyl, alkynyl, etc.; R4 with R7, R9, or R11 = atoms to form a 5-7 membered ring; R6 = alkyl, alkenyl, alkynyl, etc.; R7, R9 = H; R4R7,

R4R9 = (substituted) spirocyclyl; R13 = alkyl, alkenyl, alkynyl, cycloalkyl, etc.; R11R12 = pyrrolidinyl, tetrahydrofuryl, piperidinyl, tetrahydropyranyl; v = 1, 2], were prepared as modulators of chemokine activity (no data) for preventing asthma and other allergic diseases. Thus, 4-benzyl-1-(3-aminopropyl) piperidine (preparation given) in THF was treated with 3-cyanophenyl isocyanate to give N-(3-cyanophenyl)-N'-[3-[4-(phenylmethyl)-1piperidinyl]propyl]urea. A pharmaceutical composition comprising the compound I was claimed. RE.CNT 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT ANSWER 3 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN 2003:434550 CAPLUS 139:22112 Preparation of ureido and related piperidines as CCR3 receptor antagonists for treating asthma Du Bois, Daisy Joe; Kertesz, Denis John; Sjogren, Eric Brian; Smith, David Bernard; Wang, Beihan F. Hoffmann-La Roche A.-G., Switz. PCT Int. Appl., 93 pp. CODEN: PIXXD2 Patent English FAN.CNT 3 PATENT NO. KIND DATE APPLICATION NO. -------------------WO 2002-EP13218 20021125 WO 2003045937 A1 20030605 W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG 20030605 CA 2002-2467874 CA 2467874 AA20021125 EP 1453825 A1 20040908 EP 2002-787796 20021125 AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK 20040914 BR 2002-14613 BR 2002014613 Α 20021125 JP 2003-547387 JP 2005515193 T2 20050526 20021125 US 2002-307130 US 2003229121 Α1 20031211 20021129 PRAI US 2001-334653P Ρ 20011130

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US 2001-334655P

US 2001-334819P

WO 2002-EP13218

MARPAT 139:22112

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20011130

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AB The present invention relates to N-ureido-piperidines (shown as I; variables defined below; e.g. trans-1-[2-[4-(4-chlorobenzyl) piperidin-1-yl] cyclohexyl] -3-(3,4,5-trimethoxyphenyl) urea ). The compds. are useful as CCR3 receptor antagonists by blocking the ability of the CCR-3 receptor to bind RANTES, MCP-3 and eotaxin and thereby preventing the recruitment of eosinophils, and therefore, may be used for treatment of CCR3 mediated diseases such as asthma. Five pharmaceutical formulations are described. Seven example prepns. of intermediates and 31 of I are included. For example, trans-1-[2-[4-(4chlorobenzyl)piperidin-1-yl]cyclohexyl]-3-(3,4,5trimethoxyphenyl)urea was prepared in 55% yield from [trans-2-[4-(4-chlorobenzyl)piperidin-1-yl]cyclohexyl]amine (56 mg, 0.18 mmol) and 5-isocyanato-1,2,3-trimethoxybenzene in CH2Cl2; [trans-2-[4-(4-chlorobenzyl)piperidin-1-yl]cyclohexyl]amine was prepared in 2 steps starting from 4-(4-chlorobenzyl)piperidine and 7-oxabicyclo[4.1.0]heptane via intermediate trans-2-[4-(4-chlorobenzyl) piperidin-1-yl]cyclohexanol with yields of 88 and 67%. IC50 values for inhibiting the binding of 125I eotaxin to CCR-3 L1.2 transfectant cells were determined for 10 examples of I, e.g.  $0.0185~\mu M$  for trans-N-[3-[3-[2-[4-(4-Chlorobenzyl)piperidin -1-yl]cyclopentyl]ureido]phenyl]acetamide. For I: R1 is (C1-C2)alkylene; R2 is (un) substituted phenyl; R3 is H, C1-6 alkyl, acyl, aryl, or aryl C1-6 alkyl; ring A is a C3-7 cycloalkyl, heterocyclyl, or (un)substituted phenyl; L is -C(0)-, -C(S)-, -SO2-, -C(O)N(Ra)-, -C(S)N(Ra)-, -SO2N(Ra)-, -C(0)0-, -C(S)-0-, -S(0)20-; where Ra is H, C1-6 alkyl, acyl, aryl, aryl C1-6 alkyl, C1-6 alkoxycarbonyl, or benzyloxycarbonyl; X is absent, -(CR'R'')O-, -(CR'R'')S-, -(CR'R'')NRb- or C1-6 alkylene; where R' and R'' = H or C1-6 alkyl, and Rb is H or C1-6 alkyl; R4 is aryl or heteroaryl; and R5 is H or C1-6 alkyl; provided that when R1 is -CH2-, R2 is Ph, R3 is H, R5 is H, A is Ph, L is -C(O)NH- and X is absent, then R4 is not 2,5-difluorophenyl.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L1 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN AN 2003:434533 CAPLUS
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DN 139:22110

TI Preparation of piperidinyl carboxamides and ureas and related compounds as CCR3 receptor antagonists for treating asthma

IN Du Bois, Daisy Joe; Wang, Beihan

PA F. Hoffmann-La Roche A.-G., Switz.

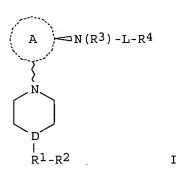
SO PCT Int. Appl., 55 pp. CODEN: PIXXD2

DT Patent

LA English

FAN. CNT 3

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                                 20031009
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     WO 2003045917
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     EP 1453804
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                                 20040908
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             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
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     US 2001-334655P
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     WO 2002-EP12997
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     MARPAT 139:22110
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The present invention relates to compds. (shown as I; variables defined AB below; e.g. cyclohexanecarboxylic acid [(1R,2R)-2-[4-(4chlorobenzyl)piperidin-1-yl]cyclopentyl]amide and [(1R,2R)-2-[4-(4chlorobenzyl)piperidin-1-yl]cyclopentyl]-3-cyclohexylurea). The compds. are useful as CCR3 receptor antagonists by blocking the ability of the CCR-3 receptor to bind RANTES, MCP-3 and eotaxin and thereby preventing the recruitment of eosinophils, and therefore, may be used for treatment of CCR3 mediated diseases such as asthma. For I: R1 is (C1-C2)alkylene; R2 is (un) substituted phenyl; R3 is H, C1-6 alkyl, acyl, aryl, or aryl C1-6 alkyl; ring A is a C3-7 cycloalkyl, heterocyclyl, or (un) substituted phenyl; D is N or C-Rb; L is -C(0)-, -C(S)-, -SO2-, -C(0)N(Ra)-, -C(S)N(Ra) -, -SO2N(Ra) -, -C(O)O -, -C(S)O -, -S(O)2O -; R4 is C1-6 alkyl, C3-7 cycloalkyl, C2-6 alkenyl, C2-6 alkynyl, heteroalkyl or acyl C1-6 alkyl; Ra is H, C1-6 alkyl, acyl, aryl, aryl C1-6 alkyl, C1-6 alkoxycarbonyl, or benzyloxycarbonyl; and Rb is H or C1-6 alkyl. Five pharmaceutical formulations are described. Seven example prepns. of intermediates are included and general procedures for preparing I are included. In one method, an amine such as 4-(4-chlorobenzyl)piperidine is combined with a carboxylic acid such as cyclohexanecarboxylic acid in the presence of 1-hydroxybenzotriazole hydrate and 1-[3-(dimethylamino)propyl]-3-ethylcarbodiimide hydrochloride in CH2Cl2 to form the amide. IC50

values for inhibiting the binding of 125I eotaxin to CCR-3 L1.2 transfectant cells were determined for 6 examples of I.

L1 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2003:44146 CAPLUS

DN 138:73178

TI Preparation and pharmaceutical combinations of [(hetero)arylalkyl]piperidinyl amine, amide, or carbamate CCR3 antagonists for treatment of asthma, allergic disease, or inflammation

IN Bahl, Ash; Perry, Matthew; Springthorpe, Brian

PA Astrazeneca AB, Swed.

SO Brit. UK Pat. Appl., 91 pp.

CODEN: BAXXDU

DT Patent

LA English

FAN.CNT 1

GI

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
ΡI	GB 2373186	A1	20020918	GB 2001-4534	20010223		
PRAI	GB 2001-4534		20010223				
OS	MARPAT 138:73178						

$$R^{1}-(Q)_{m}-(CR^{2}R^{3})_{n}-T-\begin{pmatrix} X^{2}-X^{1}\\ N-Z-R^{6} \end{pmatrix}$$

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AB Title compds. I [wherein Z = CR4R5, CO, or CR4R5Z1; Z1 = alkylene, alkenylene, or CONH; R1 = (un)substituted alkyl, alkenyl, (hetero)cycloalkyl, or (hetero)aryl; Q = O, S, NR9, CO, CONR9, NR9CO, or CH=CH; m = 0-1; n = 0-6 with the proviso that when n = 0; then m = 0; R2 and R3 = independently H or alkyl; or CR2R3 = (alkyl)cycloalkyl; T = NR10, CONR10, NR11CONR10, or CONR10R11; X1-X4 = independently CH2CHR12 or CO; R4 and R5 = independently H or alkyl; R6 = (un)substituted (hetero)aryl; R9-R11 = independently H, alkyl, haloalkyl, hydroxyalkyl, cycloalkyl(alkyl), or phenylalkyl; R12 = independently (cyclo)alkyl or CO; or R12 groups of X1 and X3 or X4, or X2 and X3 or X4 join to form CH2CH2, CH2CH2CH2, CH2OCH2, or CH2SCH2; or pharmaceutically acceptable salts or solvates thereof] were prepared as cysteine-cysteine chemokine receptor 3 (CCR3) antagonists for use in pharmaceutical combinations with a histamine antagonist, steroid, leukotriene modulator, human cytokine,  $\beta$ -agonist, phosphodiesterase inhibitor, or antibody (no data). example, 1-(3,4-dichlorobenzyl)-4-piperidinamine 2CF3CO2H was condensed with 2-(4-fluorophenyl)acetic acid to give N-[1-(3,4dichlorobenzyl)-4-piperidinyl]-2-(4-fluorophenyl)acetamide (II). I are useful in combination therapy for the treatment of asthma, rhinitis, and other allergic or inflammatory conditions (no data).

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2002:332201 CAPLUS
AN
DN
     136:355169
ΤI
     Preparation of substituted ureas as modulators of the CCR5 receptor
     Bondinell, William E.; Neeb, Michael J.
IN
     Smithkline Beecham Corporation, USA
PΑ
SO
     PCT Int. Appl., 51 pp.
     CODEN: PIXXD2
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     English
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The title compds. Q'CONER'' [I; a basic N atom in moiety E may be AΒ optionally quaternized with alkyl or is optionally present as N-oxide; R'' = H, alkyl; or R'' together with the nitrogen to which it is attached may form a heterocyclic ring with an aryl ring of E; Q' = (un)substituted isoindolyl, benzoisoindolyl, benzazepinyl, etc.; E = (un)substituted Ph, spiro[benzofuran-5-yl-3,4'-piperidine], etc.] which are modulators, agonists or antagonists, of the CCR5 receptor, were prepared Thus, treating 3-(2-diisopropylaminoethoxy)-4-methoxyaniline with triphosgene in CH2Cl2 followed by addition of Et3N and 5,6-dichloro-2,3dihydro-lH-isoindole afforded the urea II. The compds. I showed IC50 values in the range of 0.0001-100 μM against CCR5 receptor binding. In addition, this invention relates to the treatment and prevention of disease states mediated by CCR5, including, but not limited to, asthma and atopic disorders (for example atopic dermatitis and allergies), rheumatoid arthritis, sarcoidosis, or idiopathic pulmonary fibrosis and other fibrotic diseases, atherosclerosis, psoriasis, autoimmune diseases such as multiple sclerosis, treating and/or preventing rejection of transplanted organs, and inflammatory bowel disease, all in mammals, by the use of compds. I which are CCR5 receptor antagonists.

Furthermore, since CD8+ T cells have been implicated in COPD, CCR5 may play a role in their recruitment and therefore antagonists to CCR5 could provide potential therapeutic in the treatment of COPD. Also since CCR5 is a co-receptor for the entry of HIV into cells, selective receptor modulators maybe useful in the treatment of HIV infection.

L1 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:104519 CAPLUS

DN 130:153971

TI Preparation of tryptophan ureas as neurokinin antagonists

IN Shah, Shrenik K.; Qi, Hongbo; Maccoss, Malcolm

PA Merck and Co., Inc., USA

SO U.S., 14 pp. CODEN: USXXAM

DT Patent

LA English

FAN.CNT 1

GI

PATENT NO. KIND DATE APPLICATION NO. DATE

PI US 5869489 A 19990209 US 1997-814387 19970311

PRAI US 1997-814387 19970311

OS MARPAT 130:153971

- \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT \*
- AB Disclosed are substituted azacycles I [ring G = spirocycle Q1 or Q2, piperazine Q3, piperidine Q4; X = CH2, NSO2Me, NAc; R = Ph, 2-MeOC6H4, 2-MeC6H4, CH2Ph; R1 = Ph, R11 = NOMe [sic] (NHAc intended); R1= H, R11 = CH2Ph, 1,2,3,4-tetrahydroquinazolin-2-on-1-yl; R2 = OCH2Ph wherein the Ph is optionally substituted with 1-3 substituents halo, Me, or CF3; N(R3)-C1-4 alkylphenyl, wherein the C1-4 alkyl may be linear or branched, the Ph is optionally substituted with 1-3 substituents halo, Me, MeO, or CF3; R3 = H, Me, Et] as tachykinin receptor antagonists useful in the treatment of inflammatory diseases, pain or migraine, and asthma. In particular compds. I are neurokinin antagonists. Thus, amidation of 1.967 g Boc-Trp-OH (Boc = Me3CO2C) with 0.87 mL MeNHCH2Ph gave 2.56 g of the corresponding amide, which underwent deprotection with CF3CO2H, condensation with carbonyldiimidazole, and urea formation with spiro[lH-indene-1,4'-piperidine]
  hydrochloride to give title compound II (L-743,516). II and related Trp derivs. showed IC50 values of >1000 to 1 nM for human neurokinin 1 (NK1) antagonist activity.
- RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT
- L1 ANSWER 8 OF 8 CAPLUS COPYRIGHT 2005 ACS on STN
- AN 1997:798601 CAPLUS
- DN 128:13436
- TI Preparation of tryptophan urea derivatives as tachykinin receptor antagonists
- IN Maccoss, Malcolm; Oi, Hongbo; Shah, Shrenik K.
- PA Merck and Co., Inc., USA
- SO Brit. UK Pat. Appl., 47 pp.

CODEN: BAXXDU

- DT Patent
- LA English

FAN.CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE

19971001 GB 1997-5861 19970321 Α1

ΡI GB 2311523 PRAI US 1996-14003P Ρ 19960325 GB 1996-11786 Α 19960606 OS MARPAT 128:13436 GΙ

AΒ Substituted title azacycles I  $\cdot$  [Z = N, R = CH2Ph, Ph, 2-MeOC6H4, 2-MeC6H4, R1 = absent; Z = C, R = Ph, R1 = NHOMe; R = CH2Ph, 2-oxo-1,2,3,4tetrahydroquinazolin-1-yl, R1 = H; RZR1 = spiro-fused 1-indanyl, 3-indenyl, 1-methylsulfonyl-2,3-dihydroindol-3-yl, 1-acetyl-2,3dihydroindol-3-yl; R2 = OCH2Ph wherein the Ph is substituted with 0-3 groups halo, Me, or CF3; or R2 = NR3-C1-4-alkylphenyl wherein the Cl-4-alkyl may be linear or branched and the Ph may be substituted with 0-3 groups halo, Me, OMe, CF3; R3 = H, Me, Et] and pharmaceutically acceptable salts thereof are tachykinin receptor antagonists useful in the treatment of inflammatory diseases, pain or migraine, and asthma In particular, compds. I are neurokinin antagonists. Thus, amidation of 1.967 g Boc-Trp-OH (Boc = Me3CO2C) with 0.87 mL MeNHCH2Ph gave 2.56 g of the corresponding amide, which underwent deprotection with CF3CO2H, condensation with carbonyldiimidazole, and urea formation with spiro[1H-indene-1,4'-piperidine] hydrochloride to give title compound II (L-743,516). I and related Trp derivs, showed IC50 values of >1000 to 1 nM for human neurokinin 1 (NK1) antagonist activity.